

Notice of Allowability

Application No.

09/940,522

Applicant(s)

WATANABE ET AL.

Examiner

James S. Wozniak

Art Unit

2626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 2/7/2006.
2. ☒ The allowed claim(s) is/are 3 and 5-18 (now claims 1-15).
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

DETAILED ACTION

Response to Amendment

1. In response to the office action from 11/7/2005, the applicant has submitted an amendment, filed 2/7/2006, amending claims 9-10, while arguing to traverse the art rejection based on the limitations regarding progressive operator interaction and the comparison of an average reaction time to upper and lower thresholds for determining when to transfer a caller to an operator (*Amendment, Pages 12-14*). In light of the applicant's arguments and the reasons for allowance given below, claims 3 and 5-18 are allowable over the prior art of record.

Allowable Subject Matter

2. **Claims 3 and 5-18** are allowable over the prior art of record.

3. The following is an examiner's statement of reasons for allowance:

With respect to **Claims 3 and 9-10** the prior art of record fails to explicitly teach or fairly suggest a system, method, and computer readable medium containing a program for controlling a time at which an operator mediates or intervenes in a user interaction with an interactive voice response (IVR) system, wherein the operator intervention is determined by calculating an average user response (speech recognition input) time to a system interaction (synthesized voice prompt) based on history information stored in an interaction history (Fig. 2, Element 22) and

comparing the calculated time to an upper and lower threshold. If the average response time falls below the lower threshold or above an upper threshold, it is determined that a user interaction with an interactive voice response system is not being conducted smoothly and an operator proceeds to intervene in the IVR system interaction in an progressive manner from involvement to parallel input to direct operator interaction with a user.

Although Daudelin (*U.S. Patent: 4,797,910*) teaches comparing a user response time to a timeout interval (*Col. 11, Lines 23-54*), the interval taught by Daudelin, as noted by the applicant (*Amendment, Page 14*), is merely an upper threshold limit and makes no mention of a lower limit of a reaction time as is required by the presently claimed invention. It is also noted that Daudelin does not provide for the calculation of an *average* response time from an interaction history storage. Bohacek et al (*U.S. Patent: 6,411,687*) and Davis et al (*U.S. Patent: 5,583,922*) also fail to teach such a threshold comparison for determining a time at which an operator mediates or intervenes in a user interaction with an IVR system. Thus, claims 3 and 9-10 are allowable over the prior art of record.

With respect to **Claims 5 and 15-16**, the prior art of record fails to explicitly teach or fairly suggest a system, method, and computer readable medium containing a program for controlling a time at which an operator mediates or intervenes in a user interaction with an interactive voice response (IVR) system, wherein the operator intervention is determined by comparing an average user response time to an upper and lower threshold and if it is determined that an interaction is not being conducted smoothly (as noted above), determining a participation mode based on a total interaction time from a interaction beginning and a number of accesses to a voice interaction engine. The claimed participation mode progressively ranges from

involvement to parallel input to direct operator interaction with a user as is noted in claims 5 and 15-16.

As is noted by the applicant (*Amendment, Pages 12-13*), none of the prior art of record explicitly teaches or fairly suggests, either separately or in combination, a progress of operator involvement, as is required by the presently claimed invention, that is determined according to the total interaction time with an IVR system and the number of accesses to a voice interaction engine. Thus, claims 5 and 15-16 are allowable over the prior art of record.

With respect to **Claims 7, 17, and 18**, the prior art of record does not explicitly teach nor fairly suggests: the ability of an operator to assume complete control of an voice interaction engine in an interactive voice response system when it is detected that only an operator's voice continues for a predetermined time period during an error-initiated operator interaction session, in combination with a help request notification used for informing an operator of a user's failure to respond to an interactive voice system (error) and allowing the operator to voluntarily interact with the user in response to such a notification. Further the prior art of record also does not teach or fairly suggest the above features in combination with the aforementioned voice response system, wherein the voice response system utilizes a voice information mediation portion for performing the interaction error detection based on average response time and sound quality thresholds to decide whether to transfer a user to third party operator assistance. Thus, claims 7 and 17-18 are allowable over the prior art of record.

Claims 6, 8, and 11-14 further limit allowable independent claims, and thus, are also allowable over the prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James S. Wozniak whose telephone number is (571) 272-7632. The examiner can normally be reached on M-Th, 7:30-5:00, F, 7:30-4, Off Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached at (571) 272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James S. Wozniak
3/17/2006


DAVID HUDSPETH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600